Potamology: Originated from Greek word *potamos* (meaning-river) and *logos* (meaning-study). According to Oxford Dictionary, *potamology is the study of rivers.*
According to Penck (1897), the *science of rivers, which may be called potamology, must be treated under five different heads-*

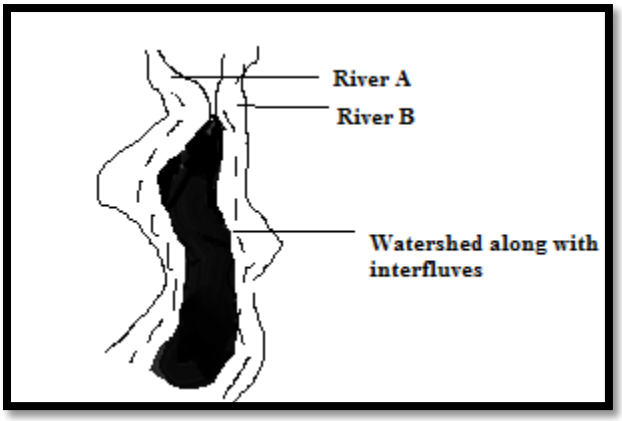
1. The physics of running water
2. The volume of water and its fluctuations
3. The action of water on its bed
4. The distribution of running water on the earth
5. Rivers as a scene of organic life.

Limnology: Originated from Greek word *limne* (meaning-lake) and *logos* (meaning-study). According to Oxford Dictionary, *limnology is the study of the biological, chemical, and physical features of lakes and other bodies of fresh water.*
Limnology may study- water flow, oxygen in the water, food web dynamics, animal movement patterns, minerals and other water chemicals, pollution, ecosystem structure, the economics of water, light influences, nutrient cycles, plants that live on, in, or near inland waters, sediments, bacteria, human influences, ecosystems, animal communities etc.

Cryology: Originated from Greek word *cryo* (meaning-ice) and *logos* (meaning-study). According to Oxford Dictionary, *the study of ice, snow, and the parts of the natural environment below freezing point.* According to Seligman (1947), *cryology is the scientific study of ice.* Seligman also mentioned the scope of cryology. Those are-

1. Standardization of maps of snow-cover and ice-cover for the world.
2. Uniform classification of different types of snow and snow-cover, and uniform nomenclature for the same.
3. A system of classification for the international bibliography of snow and ice.
4. Standardization of methods of snow-surveying and forecasting run-off from snow.

Watershed: According to Oxford Dictionary of Geography, *watershed is the boundary between two river systems. It marks the divide between drainage basins and usually runs along the highest points of the interfluves.*



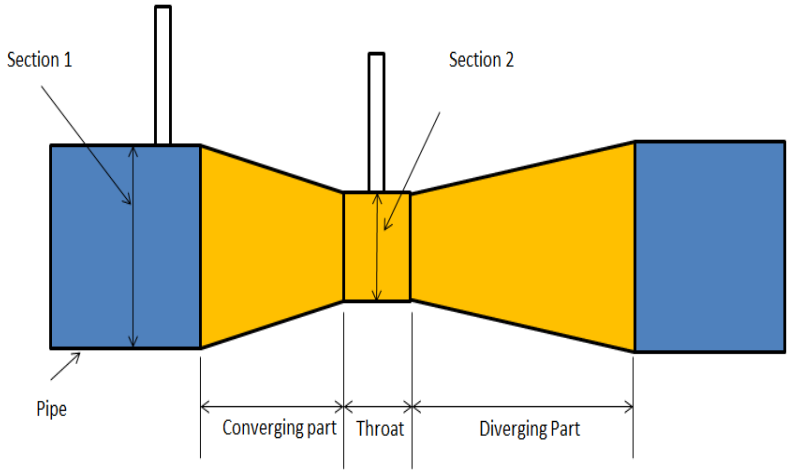
Geohydrology: Geohydrology is the study of geology with an emphasis on hydrological aspects. In other word, it is a branch of hydrology that explains geological phenomena from hydrological aspects. According to Grand Valley State University, Michigan, *Geohydrology is the study of groundwater and its physical and chemical interactions with the physical environment.*

Venturimeter: A venturimeter is a device used for measuring the rate of flow of a fluid flowing through a pipe.

Construction:

a) **Short converging part**: It is a tapered portion whose radius decreases.
b) **Throat**: It is middle portion of the venturi. Here the velocity of the fluid increases and pressure decreases. It possesses the least cross section area.
c) **Diverging part**: In this portion the fluid diverges.

Principals: The principle of venturimeter is that when a fluid flows through the venturimeter, it accelerates in the convergent section and decelerates in the divergent section, resulting in a drop in the static pressure followed by a pressure recovery in the flow direction. By measuring the difference in the pressures at an axial station upstream of the convergent section and at the throat, the volumetric flow rate can be estimated.



Measurement:

$$Q_{actual} = C_v \frac{A_1 A_2 \sqrt{(2gh)}}{\sqrt{(A_1^2 - A_2^2)}}$$

where,
Qactual = Actual discharge in m3 /s
Cv=Discharge co-efficient of a venturimeter
A1=area at the inlet side in m2
A =area at the throat side in m2
h =Differential pressure head of liquid in m
g =Acceleration due to gravity (9.81 m/s2)

Capillary rise: A rise in a liquid above the level of zero pressure due to a net upward force produced by the attraction of the water molecules to a solid surface, e.g. glass, soil (for those cases where the adhesion of the liquid to the solid is greater than the cohesion of the liquid to itself).

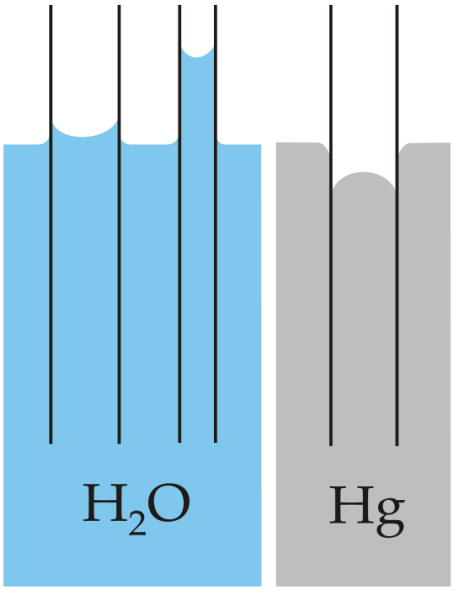


Figure: Capillary action (rise/fall) of water and mercury